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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,620	12/27/2001	Sang-Ho Choi	P67480US0	9111

7590 07/16/2004

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Washington, DC 20004

EXAMINER

QUINONES, ISMAEL C

ART UNIT	PAPER NUMBER
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2686

DATE MAILED: 07/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/026,620

Applicant(s)

CHOI ET AL.

Examiner

Ismael Quiñones

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on December 27, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☒ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on December 27, 2001 has been considered by the examiner and made of record in the application file.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. **Claims 1 and 3** are rejected under 35 U.S.C. 102(e) as being anticipated by Chang (U.S. P.G.-Pub. No. 2001/0030953).

Regarding **claim 1**, Chang discloses a method for performing an intra-packet data service node (PDSN) soft handoff, comprising the steps of: (a) setting up a channel passing through a target base station controller (T-BSC), a source

base station controller (S-BSC) and a PDSN by establishing a direct channel link between the S-BSC and the T-BSC in an active packet session mode (A direct link between a target base station which comprises a target base station controller and a source base station which comprises a source base station controller, wherein the link is an interface for soft handoff, furthermore the handoff is performed in a concurrent service in which voice and packet data are active; *Page 1, Paragraphs 8-10; Page 3, Paragraph 37; Page 4, Paragraph 51; Fig. 1; Fig. 8*); (b) performing a handoff between the S-BSC, the T-BSC and a mobile station (MS) (Wherein a mobile station is involved in the handoff process between the source base station and the target base station while moving from one service area to another; *Page 1, Paragraph 10*); (c) transmitting or receiving user packet data exchanged between the MS, and the S-BSC and the T-BSC to or from the PDSN through the established channel link (Wherein user traffic (both voice and packet data) is exchanged (transmitting or receiving) between both target and source base stations, and the PDSN; *Page 1, Paragraphs 8-9; Fig. 2*); and (d) sending or receiving user packet data exchanged between the MS and the T-BSC to or from the PDSN through the established channel link when the handoff is completed (Wherein the target base station is assigned resources for two types of services (voice and packet data) after accepting, subsequently completing handoff; *Page 5, Paragraphs 95-96; Page 6, Paragraphs 84-85*).

Regarding **claim 3**, and as applied to claim 1, Chang discloses the aforementioned method wherein, in the step (c), one of packet data transmitted from the MS to the PDSN through the S-BSC and the T-BSC is selected and

transmitted to a wireless packet data service network (A wireless packet data service node or network; *Page 1, Paragraph 7, Fig. 1*).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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8. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (U.S. P.G.-Pub. No. 2001/0030953) in view of Madour (U.S. P.G.-Pub. No. 2003/0053431), further in view of Madour (U.S. P.G.-Pub. No. 2002/0021681), even further in view of Sayeedi et al. (U.S. P.G.-Pub. No. 2002/0193113).

Regarding **claim 2**, and as applied to claim 1, Chang discloses the aforementioned method. Chang fail to clearly specify the steps of: (e) establishing a channel link between the T-BSC, a target packet control function (T-PCF) and the PDSN in a dormant packet session mode; (f) releasing the channel link set up between the S-BSC, the S-PCF and the PDSN; and (g) releasing the channel link established between the S-BSC and the T-BSC, which is established in the step (a).

In the same field of endeavor, Madour (U.S. P.G.-Pub. No. 2003/0053431) discloses a method that establishes a channel link between the T-BSC, a target packet control function (T-PCF) and the PDSN in a dormant packet session mode (Wherein the target PCF and the target BS communicate to each other in dormant packet session mode; *Page 3, Paragraph 37*).

Therefore it would have been obvious at the time the invention was made to have Chang method for providing concurrent service in a mobile communication system to establish a link between a base station and a Packet Core Function in dormant mode as taught by Madour (U.S. P.G.-Pub. No. 2003/0053431), for the purpose of acknowledging handoff completion once all connections had been set up between the target base station and the mobile station. Madour (U.S. P.G.-Pub. No. 2003/0053431) fail to clearly specify releasing the channel link set up between the S-BSC, the S-PCF

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and the PDSN; and (g) releasing the channel link established between the S-BSC and the T-BSC, which is established in the step (a).

In the same field of endeavor, Madour (U.S. P.G.-Pub. No. 2002/0021681) discloses a method for improving handoff wherein the release of the resources that are no longer needed is initiated by sending an A9-Release-A8 message to the Serving or Source PCF to release the A8 connection, subsequently dismantling said connection, furthermore sending an A9-Release-A8 Complete message to the Serving or Source BSC (*Pages 2-3, Paragraph 25*).

Therefore it would have been obvious at the time the invention was made to have Chang in view of Madour method for providing concurrent service in a mobile communication system and establishing a link between a Packet Core Function and a base station to release a connection between a Packet Core Function and a base station once handoff is completed as taught by Madour (U.S. P.G.-Pub. No. 2002/0021681) for the purpose of removing additional signaling, furthermore avoiding the misuse of valuable radio resources. Madour (U.S. P.G.-Pub. No. 2002/0021681) fail to clearly specify releasing the channel link established between the S-BSC and the T-BSC.

In the same field of endeavor, Sayeedi et al. disclose a method wherein once handoff is completed is a drop message is sent to a target base station to release rescue channels between the target base station and the source base station (*Page 3, Paragraph 19*).

Therefore it would have been obvious at the time the invention was made to have Chang in view of Madour (US 2003/0053431A1) further in view of Madour (2002/0021681) method for providing concurrent service in a mobile communication

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system establishing and releasing a link between a Packet Core Function and a base station to release communication link between two base stations as taught by Sayeedi et al. for the purpose of appropriately coordinating resources once the handoff procedure is completed.

9. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (U.S. P.G.-Pub. No. 2001/0030953) in view of Sayeedi et al. (U.S. P.G.-Pub. No. 2002/0193113).

Regarding **claim 4**, and as applied to claim 1, Chang discloses the aforementioned method, wherein the channel link established between the S-BSC and the T-BSC is an A3 channel link set up. Chang suggests setting up a channel by transmitting an A7 Handoff Request message from the S-BSC to the T-BSC (Both A3/A7 interfaces for soft/softer handoff between base stations; *Page 1, Paragraph 8*).

In the same field of endeavor, Sayeedi et al. disclose a method for handoff wherein a source base station sends an A7 Handoff Request message to a target base station and an A3 connection is activated after the target base station receives the A7 Handoff Request message (*Page 2, Paragraph 15; Page 3, Paragraphs 20-21; Fig. 2*).

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to have Change method for providing concurrent service in a mobile communication system to include A3/A7 signaling

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and channel set up as taught by Sayeedi et al. for the purpose of ensuring that the appropriate candidate cells are signaled when soft handoff is required.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Lee et al. (U.S. Pat. No. 6,731,948), Method for Supporting a Discontinuous Transmission Mode in a Base Station in a Mobile Communication System.
- b. Jiang et al. (WO 99/07174), Soft Handoff Method and Apparatus.
- c. Morales et al. (U.S. P.G.-Pub. No. 2002/0067707), Method and Apparatus to Control Handoff Between Different Wireless Systems.
- d. Chang (U.S. P.G.-Pub. No. 2001/0038615), Method for Providing Concurrent Service in a Mobile Communication System
- e. Manning et al. (U.S. Pat. No. 6,580,699), Method for Updating an R-P Connection for a Roaming Mobile Station.
- f. Abu-Amara et al. (U.S. Pat. No. 5,930,714), CDMA Inter-Mobile Switching Center Soft Hand-Off.

11. Any response to this Office Action should be **faxed to** (703) 872-9306 or **mailed to:**

Commissioner of Patents and Trademarks

P.O. Box 1450

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Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Crystal Park II

2021 Crystal Drive

Arlington, VA 22202

Sixth Floor (Receptionist)

12. Any inquiry concerning this communication on earlier communications from the Examiner should be directed to Ismael Quiñones whose telephone number is (703) 305-8997. The Examiner can normally be reached on Monday-Friday from 8:00am to 5:00pm.

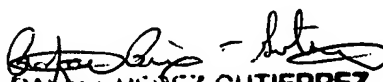
13. If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Marsha D. Banks-Harold can be reached on (703) 305-4379, and fax number is (703) 746-9818. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9301.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose number is (703) 305-4700 or call customer service at (703) 306-0377.

Ismael Quiñones

I.Q.

July 7, 2004


RAFAEL PÉREZ-GUTIERREZ
PATENT EXAMINER
7/1/04